

Remarks and Arguments

Claims 2-7 remain pending in this application. Claim 4 has been amended. No claims have been cancelled or added in this Response.

Rejection under 35 U.S.C. § 112

Claim 4 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite because a limitation states “cooling said performs compression molded in step (a)” where the preforms are compression molded in step (b). Claim 4 has been amended to correct this typographical error. Accordingly, Applicants respectfully submit that this rejection is now moot.

Rejections under 35 U.S.C. § 103

Ekart and Kikuchi

Claims 2-5 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,945,460 (“Ekart”) in view of U.S. Patent No. 6,929,836 (“Kikuchi”). The Examiner states that Ekart teaches preparing a polyester from monomers and “feeding the polymer directly to a molding or shaping machine without solidifying the polyester.” The Examiner admits that Ekart does not specifically teach the use of a compression molding machine and turns to Kikuchi for teaching the use of a compression molding machine. Applicants respectfully traverse this rejection as follows.

Ekart describes preparing polyester polymers from monomers in a melt phase and subsequently feeding this polymer directly to a molding machine without solidifying the polyester prior to entry into the molding machine. (*Ekart*. at col. 2, ll. 48-51.) This molding step produces scrap polyester, which can be recycled back to the polymerization unit. (*Id.* at col. 2, ll. 51-53.) Thus, the prime feature of Ekart is the method of recycling scrap polyester back to the polymer melt stream. (*Id.* at col. 1, l. 65 to col. 2, l. 15.)

Ekart teaches more specifically that the molten polyester is “flowed into at least one molding apparatus ... without solidifying the polyester.” (*Id.* col. 6, ll. 24-30;

emphasis added.) Ekart describes specific conditions for pumping the formed polymer to the molding machine, such as a mean residence time of approximately 7 minutes to ensure that the polymer is transferred to the molding machine before it cools to a temperature of below 200°C. (*Id.* at col. 7, ll. 50-55.) Ekart lists suitable molding processes: injection molding, gas-assist injection molding, blow molding, extrusion thermoforming and fails to describe the use of compression molding. (*Id.* at col. 6, ll. 45-49.)

Thus, Ekart describes methods for a continuous flow of polyester into the molding machine. As there is no mention of compression molding in Ekart, one skilled in the art would have no rationale for disrupting this continuous flow to provide individual compression mold charges in melt phase.

Kikuchi teaches that preforms are typically formed by injection molding. (*Id.* at col. 1, ll. 48-50.) A preform has a tubular shape in which the center of the bottom portion has a gate portion forming an inflow opening through which resin flows at the time of injection molding. (*Id.* at col. 2, ll. 2-10.) Kikuchi asserts a problem with the injection molding process in that turbulence is generated from resin flow at the gate portion or around its vicinity. (*Id.* at col. 2, ll. 11-15.) This turbulence at the gate portion causes a whitening of the preform, which upon biaxial stretch blow molding coupled with the general cooling inefficiency when forming the container, results in poor appearance characteristics such as whitening of the gate in the container. (*Id.* at col. 2, ll. 15-34.)

Thus, Kikuchi alleges that injection molding processes are disadvantageous due to the inflow of resin through a gate portion at the bottom of a preform. To overcome this problem, Kikuchi opts to eliminate the injection molding process entirely and convert to a compression molding process.

Applicants respectfully submit that the Examiner has failed to provide the requisite rationale for combining the teachings of Ekart and Kikuchi. Ekart teaches that the formed polyester polymer is “flowed” into the molding machine “without solidifying” the polymer and fails to mention the use of compression molding and individual mold charges. Ekart provides no mention of the disadvantages of injection molding, but nonetheless, describes other molding machines such as blow molding, extrusion

thermoforming. One skilled in the art following the methods of Ekart would not simply convert an injection molding process to a compression molding process, particularly in light of Ekart's teachings of delivering the resin via a continuous flow.

In contrast, Kikuchi seeks to prevent this flow and instead transport discrete lumps of polymer to the compression molding machine. Thus, some cooling and solidifying would necessarily have occurred in Kikuchi's method to form the lump, which is in direct contradiction to Ekart's requirement of not solidifying the polymer. Moreover, one skilled in the art would have also recognized that compression molding was a known process at the time of Ekart's invention yet Ekart failed to specify compression molding machines as a potential type of molding process. Instead, Ekart lists processes requiring continuously flowable polymers to deliver the polymer to a molding machine. Thus, when the references are read as a whole in light of the knowledge of one of ordinary skill in the art of injection and compression molding processes, it would not have been obvious to modify the process of Ekart with the compression molding of Kikuchi.

Kikuchi and Ekart

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kikuchi in view of Ekart. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Kikuchi in view of Ekart do not render obvious independent claim 2, much less claim 6. Kikuchi provides no basis for adding a continuous process of polycondensation to produce a polyester and delivering this resin to a mold. Kikuchi simply describes the disadvantages of injection molding and guides one skilled in the art to a compression molding process. The skilled artisan reading Kikuchi would have had no reason to turn to Ekart as it teaches, among other methods, the injection molding process rejected by Kikuchi.

Moreover, neither Kikuchi nor Ekart describe a process of producing polyester polymer and compression molding followed by the blow molding, filling, and capping in a continuous, in-line fashion. The Examiner admits that Kikuchi is deficient in this area, but fails to mention that Ekart also does not describe a continuous process of blow molding, filling, and capping after the resin is delivered to a molding machine such as an

injection mold or a extrusion thermoforming mold. Indeed, there are no steps describing injection molding and blow molding in a continuous in-line process, followed by capping or filling in a continuous in-line method in Ekart. Applicants respectfully submit that neither reference guides one skilled in the art to apply each step of claim 6 in a continuous manner.

Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness has not been established in view of Ekart and Kikuchi and request withdrawal of these rejections.

RECONSIDERATION

It is believed that all claims of the present application are now in condition for allowance.

Reconsideration of this application is respectfully requested. If the Examiner believes that a teleconference would expedite prosecution of the present application the Examiner is invited to call the Applicants' undersigned attorney at the Examiner's earliest convenience.

Any amendments or cancellation or submissions with respect to the claims herein is made without prejudice and is not an admission that said canceled or amended or otherwise affected subject matter is not patentable. Applicants reserve the right to pursue canceled or amended subject matter in one or more continuation, divisional or continuation-in-part applications.

To the extent that Applicants have not addressed one or more assertions of the Examiner because the foregoing response is sufficient, this is not an admission by Applicants as to the accuracy of such assertions.

Please grant any extensions of time required to enter this response and charge any fees in addition to fees submitted herewith that may be required to enter/allow this response and any accompanying papers to our deposit account 02-3038 and credit any overpayments thereto.

Respectfully submitted,

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